

SAFETY DATA SHEET

M-Bond GA-61 Part A



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP)
& 2020/878

www.vpgsensors.com
Date of issue: 24/11/2022
Date of First Issue: 20/03/2012
Version 3.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier		
Product Name	M-Bond GA-61 Part A	
Product Code	Not applicable	
Unique Formula Identifier (UFI)	Not applicable	
Nanoform	The product does not contain nanoparticles.	
1.2 Relevant identified uses of the substance or mixture and uses advised against		
Identified Use(s)	PC14 Metal surface treatment products, including galvanic and electroplating products.	
Uses Advised Against	For professional users only.	
1.3 Details of the supplier of the safety data sheet		
Company Identification	VISHAY MEASUREMENTS GROUP GMBH Tatschenweg 1 74078 Heilbronn Deutschland	
Telephone	+49 (0) 7131 39099-0	
Fax	+49 (0) 7131 39099-229	
E-Mail (competent person)	mm.de@vpgsensors.com	
1.4 Emergency telephone number		
National Poisons Information Service (United Kingdom)	+44 (0) 3448 920111	24 hr. emergency phone number Healthcare Professionals ONLY Members of Public CHEMTREC (24 hours)
NHS 24	111	
Emergency Phone No.	(00-1) 703-527-3887	
Languages spoken	All official European languages.	

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture		
2.1.1 Regulation (EC) No. 1272/2008 (CLP)	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Aquatic Chronic 2; H411	
2.2 Label elements		
Product Name	M-Bond GA-61 Part A	
Hazard Pictogram(s)	 	
Signal Word(s)	WARNING	
Contains:	Phenol, polymer with formaldehyde, glycidyl ether; Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700).	
Hazard Statement(s)	H315: Causes skin irritation. H317: May cause an allergic skin reaction.	

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Precautionary Statement(s)	H319: Causes serious eye irritation. H411: Toxic to aquatic life with long lasting effects. P264: Wash hands and exposed skin thoroughly after handling. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P302+P352: IF ON SKIN: Wash with plenty of water. P362+P364: Take off contaminated clothing and wash it before reuse. P391: Collect spillage.
Supplemental information	None Known
2.3 Other hazards	None Known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances - Not applicable.

3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard classification
Phenol, polymer with formaldehyde, glycidyl ether	>90 - < 100	28064-14-4	608-164-0	Not yet assigned in the supply chain	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	> 5 - <10	25068-38-6	500-033-5	Not yet assigned in the supply chain	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Aquatic Chronic 2; H411

Specific concentration limit (SCL) & M-factor

Chemical identity of the substance	CAS No.	EC No.	Specific concentration limit (SCL)	M-factor
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	25068-38-6	500-033-5	Skin Irrit. 2; H315: C ≥ 5 % Eye Irrit. 2; H319 : C ≥ 5 %	-

Note: For full text of H phrases see section 16.

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Inhalation

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Do not breathe dusts or mists. Avoid all contact. Avoid exposure during pregnancy.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical advice/attention if you feel unwell. If exposed or concerned: Get medical attention/advice.

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Skin Contact	IF ON SKIN: Remove contaminated clothing and wash all affected areas with plenty of water. Contaminated clothing should be thoroughly cleaned. If skin irritation or rash occurs: Get medical advice/attention.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if eye irritation develops or persists.
Ingestion	Rinse mouth. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person. If exposed or concerned: Get medical attention/advice.
4.2 Most important symptoms and effects, both acute and delayed	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.
4.3 Indication of any immediate medical attention and special treatment needed	Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media Suitable Extinguishing media	As appropriate for surrounding fire. Extinguish preferably with foam, carbon dioxide or dry chemical.
Unsuitable extinguishing media	Do not use water jet. Direct water jet may spread the fire.
5.2 Special hazards arising from the substance or mixture	May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide and Phenolics. Susceptible to polymerisation initiated by prolonged heating or the presence of catalyst.
5.3 Advice for fire-fighters	Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Avoid breathing vapours. Avoid all contact. In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required. See Section: 8.
6.2 Environmental precautions	Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.
6.3 Methods and material for containment and cleaning up	Ensure suitable personal protection during removal of spillages. Do not use cloths for mopping up. Flood with water to complete polymerisation and scrape off the floor. Cured material can be disposed of as non-hazardous waste.
6.4 Reference to other sections	See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Ensure adequate ventilation. Avoid all contact. Avoid breathing dust/mist. Use personal protective equipment as required. See Section: 8. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Susceptible to polymerisation initiated by prolonged heating or the presence of catalyst. bulk: May undergo autopolymerisation.
7.2 Conditions for safe storage, including any incompatibilities Storage temperature Storage life Incompatible materials	Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Keep away from heat and direct sunlight. Ambient Stable under normal conditions Keep away from: Acids, strong bases, Strong Oxidizing agents and halogenated compounds
Storage class (TRGS 510)	LGK 10
7.3 Specific end use(s)	See Section: 1.2.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

United Kingdom

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Talc, respirable dust	14807-96-6	-	1	-	-	-

Source: UK WEL: Workplace Exposure Limit (UK HSE EH40)

Ireland

SUBSTANCE	CAS No.	Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
		ppm	mg/m ³	ppm	mg/m ³	
Talc Total inhalable dust respirable dust	14807-96-6	-	10 0.8	-	-	- -

Source: 2021 Code of Practice for Safety, Health and Welfare at Work (Chemical Agents) Regulation (2001 – 2021) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001 – 2019); Health and Safety Authority

8.1.2 Biological limit value

Not established.

8.1.3 PNECs and DNELs

Not established.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure adequate ventilation Or Use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure limit.

8.2.2 Individual protection measures, such as personal protective equipment (PPE)

General hygiene measures for the handling of chemicals are applicable. Avoid all contact. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Contaminated clothing should be thoroughly cleaned. Do not eat, drink or smoke at the work place.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/ face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

Skin protection



Hand protection:

Wear impervious gloves (EN374). Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Recommended: PVC / Nitrile rubber.

Body protection:

Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection



Use only in well-ventilated areas. In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A (EN141 or EN405) may be appropriate.

Thermal hazards

Not applicable

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8.2.3 Environmental exposure controls

Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid (viscous)
Colour	Off-white/ brown
Odour	Not established
Melting point and freezing point	Not established
Boiling point or initial boiling point and boiling range	Not established
Flammability	Not established
Lower and upper explosion limit or lower and upper flammability limit	Not established
Flash point	Not established
Auto-ignition temperature	Not established
Decomposition temperature	Not established
pH	Not established
Kinematic viscosity	Not established
Solubility	Not established
Partition coefficient: n-octanol/water (log value)	not applicable
Vapour pressure	Not established
Density and/or relative density	1.27 g/cm ³ @ 77 °F (25 °C)
Relative vapour density	Not established
Particle characteristics	not applicable

9.2 Other information

Oxidising properties Not oxidising

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Susceptible to polymerisation initiated by prolonged heating or the presence of catalyst. bulk: May undergo autopolymerisation.
10.4 Conditions to avoid	Keep away from heat, sources of ignition and direct sunlight.
10.5 Incompatible materials	Keep away from: Acids, strong bases, Strong Oxidizing agents and halogenated compounds
10.6 Hazardous decomposition product(s)	May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide and Phenolics.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Ingestion	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LD50 > 2000 mg/kg bw/day
Inhalation	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 20 mg/l. (Vapour)
Skin Contact	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LD50 > 2000 mg/kg bw/day

Skin corrosion/irritation

Phenol, polymer with formaldehyde, glycidyl ether	Mixture: Skin Irrit. 2: Causes skin irritation. Skin Irrit. 2: Causes skin irritation. No data available
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Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	EU classification and labelling inventory Skin Irrit. 2: Causes skin irritation. Harmonised Classification
Serious eye damage/irritation	Mixture: Eye Irrit. 2: Causes serious eye irritation. Eye Irrit. 2: Causes serious eye irritation.
Phenol, polymer with formaldehyde, glycidyl ether	No data available
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	EU classification and labelling inventory Eye Irrit. 2: Causes serious eye irritation. Harmonised Classification
Respiratory or skin sensitization	Mixture: Skin Sens. 1: May cause an allergic skin reaction. Skin Sens. 1: May cause an allergic skin reaction.
Phenol, polymer with formaldehyde, glycidyl ether	No data available
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	EU classification and labelling inventory Skin Sens. 1: May cause an allergic skin reaction. Harmonised Classification
Germ cell mutagenicity	Mixture: Based upon the available data, the classification criteria are not met.
Carcinogenicity	Mixture: Based upon the available data, the classification criteria are not met.
Reproductive toxicity	Mixture: Based upon the available data, the classification criteria are not met.
STOT - single exposure	Mixture: Based upon the available data, the classification criteria are not met.
STOT - repeated exposure	Mixture: Based upon the available data, the classification criteria are not met.
Aspiration hazard	Mixture: Based upon the available data, the classification criteria are not met.
11.2 Information on other hazards	
11.2.1 Endocrine disrupting properties	This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria. None
11.2.2 Other information	

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Mixture: Based upon the available data, the classification criteria are not met.
12.2 Persistence and degradability	No data for the mixture as a whole.
Phenol, polymer with formaldehyde, glycidyl ether	No data available
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	Little or no biodegradation has been observed ECHA registration dossier
12.3 Bioaccumulative potential	No data for the mixture as a whole.
Phenol, polymer with formaldehyde, glycidyl ether	No data available
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	No data available
12.4 Mobility in soil	No data for the mixture as a whole.
Phenol, polymer with formaldehyde, glycidyl ether	No data available
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	No data available
12.5 Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
12.6 Endocrine disrupting properties	This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.
12.7 Other adverse effects	None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	This material and its container must be disposed of as hazardous waste. Dispose of wastes in an approved waste disposal facility. Waste classification according to Directive 2008/98/EC (Waste Framework Directive): HP4, HP14
13.2 Additional Information	Dispose of contents in accordance with local, state or national legislation.

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SECTION 14: TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA/ICAO
14.1 UN number or ID number	UN 3082	UN 3082	UN 3082	UN 3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Phenol, polymer with formaldehyde, glycidyl ether and Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))			
14.3 Transport hazard class(es)	9	9	9	9
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Classified as a Marine Pollutant./ Environmentally hazardous substance			
14.6 Special precautions for user	See Section: 2			
14.7 Maritime transport in bulk according to IMO instruments	No information available.			
14.8 Additional Information	No information available.			

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1 EU regulations	Product: Entry number: 3 E2
Use restriction according to REACH annex XVII, no.: Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive] Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive] Restrictions of occupation:	This substance/mixture does not contain any volatile organic compounds in the sense of Directive 2010/75/EU. Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
To follow:	Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work
15.1.2 National regulations Germany	obviously hazardous to water (WGK 2) (Selbsteinstufung gemäß AwSV (Gemisch, Rechenregel).)
Water hazard class (WGK)	A REACH chemical safety assessment has not been carried out.
15.2 Chemical Safety Assessment	

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New SDS Regulation 2020/878 format, all sections have been updated to include new information. Please review SDS with care.

References:

Existing Safety Data Sheet (SDS), Harmonised Classification(s) for Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) (CAS# 25068-38-6)

Existing ECHA registration(s) for Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) (CAS# 25068-38-6)

The classification and labelling inventory for Phenol, polymer with formaldehyde, glycidyl ether (CAS# 28064-14-4), Crystalline silica (CAS# 14808-60-7) and Magnesium silicate talc (CAS# 14807-96-6).

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Skin Irrit. 2; H315	Threshold Calculation

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Skin Sens. 1; H317	Threshold Calculation
Eye Irrit. 2; H319	Threshold Calculation
Aquatic Chronic 2; H411	Summation Calculation

LEGEND

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived no effect level
EU	European Union
EC	European Community
ECHA	European Chemicals Agency
EN	European Standard
EC50	Effect concentration; 50 %
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
LC50	Lethal concentration at which 50% of the population is killed
LD50	Lethal dose at which 50% of the population is killed
LTEL	Long term exposure limit
NOAEC	No observed adverse effect concentration
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time Weighted Average
STEL	Short term exposure limit
vPvB	very Persistent and very Bioaccumulative
UN	United Nations
VOC	Volatile organic compounds

Hazard classification / Classification code:

Skin Irrit. 2; Skin corrosion/irritation, Category 2
Skin Sens. 1; Skin Sensitisation, Category 1
Eye Irrit. 2; Eye Irritation, Category 2
Aquatic Chronic 2; Hazardous to the aquatic environment, Chronic ,
Category 2

Hazard Statement(s)

H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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